

**From:** [ANDERSON Jim M](#)  
**To:** [Chip\\_Humphrey/R10/USEPA/US@EPA](#)  
**Cc:** [MCCLINCY Matt](#); [GAINER Tom](#)  
**Subject:** RE: Portland Harbor: Hot Spots  
**Date:** 11/29/2012 08:16 AM

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Chip,

The 1<sup>st</sup> paragraph of the subject draft FS comment in your e-mail (“ARARs – Hot Spots of contamination....”) very closely paraphrases DEQ’s Comment # 13 from our 7/27/12 comments to you on the draft FS. So, I don’t have any concerns about the text in that paragraph. The 1<sup>st</sup> 2 sentences of the 2<sup>nd</sup> paragraph also very closely paraphrases DEQ’s Comment #13, so again, no problem. However, DEQ didn’t write the remainder of the that 2<sup>nd</sup> paragraph.

I have 2 concerns:

- 1) Are the 2 subject paragraphs in your e-mail the extent of EPA’s comments to the LWG on hot spots? In our 7/27/12 comments, we presented 2 comments (#13 & #14) that consisted of 12-some paragraphs. I don’t think EPA needs to include DEQ’s comments verbatim & our comments could be condensed..., but they are comments from the state on state ARARs, & the 2 paragraphs in your e-mail don’t cover all DEQ’s concerns on the subject. I think EPA should submit comments to the LWG that more closely reflect DEQ’s original comments. I’m particularly concerned about:

- a) The draft comment doesn’t challenge the LWG’s conclusion that there are no hot spots in Portland Harbor.
- b) The draft comment doesn’t include certain important messages from the state regarding high-concentration hot spots (the following 2 paragraphs from DEQ’s 7/27/12 Comment #13):

*“While the LWG’s arguments have merit, DEQ is still concerned that: 1) an attempt to identify high concentration Hot Spots in Portland Harbor has not been done; 2) high concentration Hot Spots may exist in Portland Harbor; & 3) some of those Hot Spots may not be covered by active remediation included in current remedial alternatives. Here are 2 specific examples of our concerns. 1<sup>st</sup>, will the footprints of active remediation areas cover areas of highly contaminated sediment that could be consider Hot Spots? We agree with the LWG’s argument that RALs identify areas of high concentration sediment contamination, but are high concentration Hot Spots larger than RAL footprints? 2<sup>nd</sup>, are there areas of high concentration Hot Spots that would be defined by chemicals other than the 4 Bounding Chemicals..., e.g., metals?*

*Regardless of the difficulties & problems, the LWG needs to attempt to identify high concentration Hot Spots in Portland Harbor. While the LWG’s FS strategy may approach the intent of the Hot Spot rules, it does not answer the question of whether high concentration Hot Spots exist. If high concentration Hot Spots actually exist outside of areas currently designated for active remediation, then the very important state ARAR for preference for treatment will not be addressed. As we’ve previously said, DEQ is willing to work with the LWG to develop a reasonable approach*

*for identifying high concentration Hot Spots, & then participate in decisions of how to address potential Hot Spots in the FS.”*

- 2) One of the problems with using PCB congener data to define high-concentration hot spots is that we simply don't have a lot of sediment congener data. Another problem is that our high-concentration hot spots are based on a exceedance of acceptable-risk levels, & we used total PCBs, not congeners in the human health risk assessment to define ARLs. I think the easiest way for the LWG to evaluate the presence of high-concentration hot spots is to use EPA-defined acceptable risk levels (ARLs) in sediment, & then multiply those ARLs by the appropriate number:

- 100 times the ARL for human exposure to each individual carcinogen,
- 10 times the ARL for human exposure to each individual noncarcinogen, or
- 10 times the ARL for exposure of populations of eco receptors to each individual hazardous substance.

Jim Anderson  
Manager, DEQ Portland Harbor Section  
ph: 503.229.6825  
fax: 503.229.6899  
cell: 971.563.1434

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**From:** Humphrey.Chip@epamail.epa.gov [mailto:Humphrey.Chip@epamail.epa.gov]  
**Sent:** Wednesday, November 28, 2012 1:46 PM  
**To:** ANDERSON Jim M  
**Subject:** RE: Portland Harbor: Hot Spots

Jim - here are the comments on hot spots from the current draft comment set that I was referring to. The 2nd paragraph seems to be specific to Section 5.5.1 - Potential Oregon Hot Spots, Table 5.5-1 in the draft FS document.

thanks  
Chip

ARARs - Hot Spots of contamination - Hot Spots of contamination are an important ARAR in the Portland Harbor project for DEQ. Hot Spots are addressed in several sections of Oregon Hazardous Substance Remedial Action Rules (OAR 340-122). The basic intent of Hot Spot rules is to require a preference for treatment of highly contaminated material or highly mobile material. As discussed in DEQ's 1998 "Guidance for Identification of Hot Spots", the definition of Hot Spots depends upon the environmental medium that's contaminated. For media other than water (e.g., sediment), a Hot Spot exists if the site poses an unacceptable risk (threshold criterion)..., and if the contamination is highly concentrated, highly mobile, or cannot be reliably contained.

The LWG concludes there are no high concentration Hot Spots in Portland Harbor. EPA and DEQ disagree with this conclusion. Table 5.5-1 presents theoretical hot spots for certain PCB congeners. Based on whole body fish consumption and PCB 126, hot spot thresholds of 0.015 and 0.090 ug/kg can be specified. This results in hot spots of contamination at OSM, Schnitzer International Slip,

Willamette Cove, Swan Island Lagoon, Gunderson and River Mile 11E. In addition, hot spots of contamination are present at Gasco and Arkema based on the presence of NAPL and elevated levels of PAHs and DDX, respectively. For example, numerous surface sediment samples collected offshore of the Gasco Site exceed the direct contact hot spot thresholds of 16,200 ug/kg and 42,300 ug/kg developed for benzo(a)pyrene. This results in the 9 key areas across the Portland Harbor site where a preference for treatment or removal and disposal is required as part of the FS evaluation.

▼ ANDERSON Jim M ---11/28/2012 08:48:11 AM---Eric, "Residual risk assessment (RRA)" is 1 other OR Cleanup Rules ARAR we need to consider. RRAs a

From: ANDERSON Jim M <[ANDERSON.Jim@deg.state.or.us](mailto:ANDERSON.Jim@deg.state.or.us)>  
To: "Eric Blischke ([blischke@cdm.com](mailto:blischke@cdm.com))" <[blischke@cdm.com](mailto:blischke@cdm.com)>  
Cc: Chip Humphrey/R10/USEPA/US@EPA  
Date: 11/28/2012 08:48 AM  
Subject: RE: Portland Harbor: Hot Spots

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Eric,

"Residual risk assessment (RRA)" is 1 other OR Cleanup Rules ARAR we need to consider. RRAs are cited in OAR 340-122-0084(4) & defined in OAR 340-122-0115(47). I'm sure you're familiar with RRAs. We think an RRA should be conducted before a remedy is approved/selected & the RRA should include:

- 1) A qualitative assessment of risk from untreated contamination at the conclusion of cleanup.
- 2) A qualitative or quantitative assessment of the adequacy & reliability of any ICONs used to manage untreated contamination. This condition has always puzzled me, because it seems like it part of the "effectiveness" & "long-term reliability" balancing factors in OAR 340-122-0090.

Something for you to consider. As always, I'll be happy to discuss it with you.

Jim

**From:** ANDERSON Jim M  
**Sent:** Wednesday, November 21, 2012 3:42 PM  
**To:** Eric Blischke ([blischke@cdm.com](mailto:blischke@cdm.com))  
**Subject:** FW: Portland Harbor: Hot Spots

Eric,

We talked several weeks ago about hot spots & you asked if I could send you DEQ/DOJ positions regarding legal opinions on some of the hot spot issues related to PH. DEQ & DOJ produced several memos starting in December 2011 thru spring of 2012, but those memos are being held as confidential under attorney/client privilege, so I can't share them with you. However, I can share some other important documents with you including:

- 1) LWG's 1/13/12 "Discussion of Potential Oregon Hot Spot Evaluation Methods for the Portland Harbor Site Draft FS" - This submittal was a draft version of Section 5.5.1 of the 3/30/12 draft FS. I'd look at the

draft FS rather than the 1/13/12 submittal.

2) LWG's 5/4/12 "Background Document: Hot Spots in the Portland Harbor Feasibility Study" - See attached 4/10/12 e-mail from Jen W

3) DEQ's (Jim A) 5/21/12 e-mail to LWG "5/10/12 DEQ/EPA/LWG Hot Spot Meeting" - See attached

4) Kurt B's 6/5/12 e-mail to LWG LCT "Hot Spots" - See attached

5) LWG's 6/7/12 "LWG Responses to DEQ's May 21, 2012 Seven Concerns contained in an Email Regarding "5/10/12 DEQ/EPA/LWG Hot Spots Meeting" - See attached 6/7/12 e-mail from Jen W

6) DEQ's 6/11/12 "Identifying Hot Spots for Chemical Classes" - See attached 6/11/12 e-mail from Jim A

Hope this helps. Have a great holiday.

Jim

**From:** ANDERSON Jim M

**Sent:** Monday, June 11, 2012 4:29 PM

**To:** 'Jennifer Woronets'

**Cc:** BURKHOLDER Kurt; 'Vrooman Gary L'; 'Cora.Lori@epamail.epa.gov'; 'Chip Humphrey'; 'Koch.Kristine@epamail.epa.gov'

**Subject:** RE: Portland Harbor: Hot Spots

Jen,

One of the action items from the DEQ/EPA/LWG 5/10/12 hot spots meeting was for me to provide the LWG with DEQ's position on high concentration high spots..., particularly on classes of organic compounds. The attachment specifically addresses the 7<sup>th</sup> concern in my 5/21/12 e-mail to the LWG & EPA.

Please distribute this to the appropriate LWG parties.

Jim Anderson

Manager, DEQ Portland Harbor Section

ph: 503.229.6825

fax: 503.229.6899

cell: 971.563.1434

**From:** Jennifer Woronets [<mailto:jworonets@anchorqea.com>]

**Sent:** Friday, June 08, 2012 12:19 PM

**To:** BURKHOLDER Kurt

**Cc:** ANDERSON Jim M; Jennifer Woronets; Bob Wyatt

**Subject:** RE: Portland Harbor: Hot Spots

Hi Kurt,

The LWG in person attendees will be: Bob Wyatt, Patty Dost, Jessica Hamilton, Joan Snyder, Carl Stivers and possibly Robin Seifried.

Jim McKenna will attend by phone.

Please let me know if you have any questions.

Thank you,

Jen Woronets ☺

Anchor QEA, LLC

[jworonets@anchorqea.com](mailto:jworonets@anchorqea.com)

421 SW Sixth Avenue, Suite 750

Portland, OR 97204

503-972-5014

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**From:** Jennifer Woronets  
**Sent:** Friday, June 08, 2012 9:40 AM  
**To:** Burkholder Kurt  
**Cc:** 'ANDERSON Jim M'; Jennifer Woronets  
**Subject:** RE: Portland Harbor: Hot Spots

Hi Kurt,

I inquired about the phone since Jim McKenna will be participating by phone. I wanted to be certain he would be able to call in and hear the conversation.  
Jim will use the conference line that the LWG uses for calls with the agency team. Joan will have this information when she arrives on Friday.

I do not think you need to reserve a larger conference room. I will inquire with Jim and Bob about the LWG participants and get back to you shortly.

Thank you,  
Jen Woronets ☺  
Anchor QEA, LLC  
[jworonets@anchorqea.com](mailto:jworonets@anchorqea.com)  
421 SW Sixth Avenue, Suite 750  
Portland, OR 97204  
503-972-5014

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**From:** Burkholder Kurt [<mailto:Kurt.Burkholder@doj.state.or.us>]  
**Sent:** Friday, June 08, 2012 9:36 AM  
**To:** Jennifer Woronets  
**Cc:** 'ANDERSON Jim M'  
**Subject:** Portland Harbor: Hot Spots

I can arrange that, Jennifer, but now have to ask how big is this meeting going to be? Originally, it was five or six of us. I might need to find a larger conference room. Please let me know who from LWG will be participating.

**From:** Jennifer Woronets [<mailto:jworonets@anchorqea.com>]  
**Sent:** Friday, June 08, 2012 9:18 AM  
**To:** Burkholder Kurt  
**Cc:** Jennifer Woronets  
**Subject:** RE: Portland Harbor: Hot Spots

Hi Kurt,

I wanted to confirm that your conference room has a speaker phone.

Thank you,  
Jen Woronets ☺

Anchor QEA, LLC  
[jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)  
421 SW Sixth Avenue, Suite 750  
Portland, OR 97204  
503-972-5014



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**From:** Burkholder Kurt [<mailto:Kurt.Burkholder@doj.state.or.us>]  
**Sent:** Thursday, June 07, 2012 11:34 AM  
**To:** Jennifer Woronets  
**Cc:** 'jim.mckenna@verdantllc.com'; ANDERSON Jim M; Vrooman Gary L; Snyder, Joan; Bob Wyatt  
**Subject:** Portland Harbor: Hot Spots

correct

**From:** Jennifer Woronets [<mailto:jworonets@anchoragea.com>]  
**Sent:** Thursday, June 07, 2012 11:17 AM  
**To:** Burkholder Kurt  
**Cc:** 'jim.mckenna@verdantllc.com'; ANDERSON Jim M; Vrooman Gary L; Jennifer Woronets; Snyder, Joan; Bob Wyatt  
**Subject:** RE: Portland Harbor: Hot Spots

Kurt,

Can you please confirm that this is the correct location for the June 15<sup>th</sup> meeting?

Oregon DOJ

1515 SW 5<sup>th</sup> Ave., 4<sup>th</sup> Floor

Marquam Conference Room

Thank you,  
Jen Woronets ☺  
Anchor QEA, LLC  
[jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)  
421 SW Sixth Avenue, Suite 750  
Portland, OR 97204  
503-972-5014



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**From:** Wyatt, Robert [<mailto:rjw@nwnatural.com>]  
**Sent:** Thursday, June 07, 2012 10:25 AM  
**To:** Snyder, Joan; Burkholder Kurt  
**Cc:** Jennifer Woronets; 'jim.mckenna@verdantllc.com'; ANDERSON Jim M; Vrooman Gary L  
**Subject:** RE: Portland Harbor: Hot Spots

Hi Kurt, the LWG hot spot team is looking forward to meeting with DEQ at 1:00 on the 15th. Please lock in the date and time.

Thank you,

Bob

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**From:** Snyder, Joan [JPSNYDER@stoel.com]  
**Sent:** Thursday, June 07, 2012 9:21 AM  
**To:** Burkholder Kurt  
**Cc:** Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); 'jim.mckenna@verdantllc.com'; Wyatt, Robert; ANDERSON Jim M; Vrooman Gary L  
**Subject:** RE: Portland Harbor: Hot Spots  
I'm not sure. Jim and Bob need to decide that.

**From:** Burkholder Kurt [<mailto:Kurt.Burkholder@doj.state.or.us>]  
**Sent:** Thursday, June 07, 2012 9:19 AM  
**To:** Snyder, Joan  
**Cc:** Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); 'jim.mckenna@verdantllc.com'; [rjw@nwnatural.com](mailto:rjw@nwnatural.com); ANDERSON Jim M; Vrooman Gary L  
**Subject:** Portland Harbor: Hot Spots

Which means we take it off the calendar next week?

**From:** Snyder, Joan [<mailto:JPSNYDER@stoel.com>]  
**Sent:** Thursday, June 07, 2012 9:15 AM  
**To:** Burkholder Kurt  
**Cc:** Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); 'jim.mckenna@verdantllc.com'; [rjw@nwnatural.com](mailto:rjw@nwnatural.com)  
**Subject:** RE: Portland Harbor: Hot Spots

Thanks, Kurt. Jen Woronets has taken over trying to schedule this; she can work directly with Jim McKenna on his schedule. So watch for her emails . . .

**From:** Burkholder Kurt [<mailto:Kurt.Burkholder@doj.state.or.us>]  
**Sent:** Thursday, June 07, 2012 8:29 AM  
**To:** Snyder, Joan; Patty Dost ([pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)); 'jim.mckenna@verdantllc.com'; Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); [Kelly.Madalinski@portofportland.com](mailto:Kelly.Madalinski@portofportland.com); Jessica T. Hamilton ([jessica.hamilton@portofportland.com](mailto:jessica.hamilton@portofportland.com)); Carl Stivers ([cstivers@anchoragea.com](mailto:cstivers@anchoragea.com)); Amanda Shellenberger  
**Cc:** 'ANDERSON Jim M'; Vrooman Gary L  
**Subject:** Portland Harbor: Hot Spots

Joan, 1:00 p.m. is what works on this end on the 15th. If we need to reschedule this for the week of the 25<sup>th</sup>, let me know.

**From:** Snyder, Joan [<mailto:JPSNYDER@stoel.com>]  
**Sent:** Tuesday, June 05, 2012 1:23 PM  
**To:** Burkholder Kurt; Patty Dost ([pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)); 'jim.mckenna@verdantllc.com'; Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); [Kelly.Madalinski@portofportland.com](mailto:Kelly.Madalinski@portofportland.com); Jessica T. Hamilton ([jessica.hamilton@portofportland.com](mailto:jessica.hamilton@portofportland.com)); Carl Stivers ([cstivers@anchoragea.com](mailto:cstivers@anchoragea.com)); Amanda Shellenberger  
**Cc:** 'ANDERSON Jim M'; Vrooman Gary L  
**Subject:** RE: Portland Harbor: Hot Spots

Kurt,

Would it work to do it at 3:15 or 3:30 on Friday the 15th? That way Jim McKenna could participate by phone after he gets to his designation.

**From:** Burkholder Kurt [<mailto:Kurt.Burkholder@doj.state.or.us>]  
**Sent:** Tuesday, June 05, 2012 12:36 PM

**To:** Snyder, Joan; Patty Dost ([pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)); 'jim.mckenna@verdantllc.com'; Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); [Kelly.Madalinski@portofportland.com](mailto:Kelly.Madalinski@portofportland.com); Jessica T. Hamilton ([jessica.hamilton@portofportland.com](mailto:jessica.hamilton@portofportland.com)); Carl Stivers ([cstivers@anchoragea.com](mailto:cstivers@anchoragea.com)); Amanda Shellenberger  
**Cc:** 'ANDERSON Jim M'; Vrooman Gary L  
**Subject:** Portland Harbor: Hot Spots

I'm sorry, then we'd lose Gary. The alternative would be sometime the week of the 25th (Jim is out the week of the 18<sup>th</sup>), but Jim would rather meet earlier than that.

**From:** Snyder, Joan [<mailto:JPSNYDER@stoel.com>]  
**Sent:** Tuesday, June 05, 2012 11:01 AM  
**To:** Burkholder Kurt; Patty Dost ([pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com)); 'jim.mckenna@verdantllc.com'; Jennifer Woronets ([jworonets@anchoragea.com](mailto:jworonets@anchoragea.com)); [Kelly.Madalinski@portofportland.com](mailto:Kelly.Madalinski@portofportland.com); Jessica T. Hamilton ([jessica.hamilton@portofportland.com](mailto:jessica.hamilton@portofportland.com)); Carl Stivers ([cstivers@anchoragea.com](mailto:cstivers@anchoragea.com)); Amanda Shellenberger  
**Cc:** 'ANDERSON Jim M'; Vrooman Gary L  
**Subject:** RE: Portland Harbor: Hot Spots

Kurt,

I just talked to Jim McKenna and Carl Stivers. They would like to be included as well, if Jim Anderson is going to participate (which they think is a good idea). Is it possible to move the meeting to 11 am? Jim McKenna has a flight out that day at 1 p.m., so if we schedule it at 11, he could attend by phone. Carl would be able to attend in person.

I think you said Jim has a meeting that will run until 11. Does it help him if we use DEQ as the meeting place?

Thanks!

--Joan

**From:** Burkholder Kurt [<mailto:Kurt.Burkholder@doj.state.or.us>]  
**Sent:** Tuesday, June 05, 2012 10:26 AM  
**To:** Snyder, Joan; Patty Dost ([pdost@pearllegalgroup.com](mailto:pdost@pearllegalgroup.com))  
**Cc:** 'ANDERSON Jim M'; Vrooman Gary L  
**Subject:** Portland Harbor: Hot Spots

Joan, this confirms we can meet with you and Patty on Friday, June 15. I've reserved a conference room at DOJ for 1:00 p.m. if that time and place works for you:

Friday June 15, 1:00 p.m.  
Oregon DOJ  
1515 SW 5<sup>th</sup> Ave., 4<sup>th</sup> Floor  
Marquam Conference Room

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